

Appl. No. 10/754,726  
Amdt. dated July 5, 2006  
Reply to Office action of April 05, 2006

### **REMARKS**

**Claims 24-31, 37, 39 and 40 are rejected under 35 USC 112 second paragraph, as being indefinite. Clarification and or appropriate correction is required. In particular:**

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**With respect to claim 24, the recitation "a difference of the operational voltage and the control voltage and a difference of the control voltage and the ground" causes the claim to be indefinite.**

10 Applicant has amended claim 24 to change the indefinite limitation "a difference of the operational voltage and the control voltage and a difference of the control voltage and the ground" to the definite limitation "a difference of the operational voltage and a first control voltage of the control voltage and a difference of a second control signal of the control voltage and the ground". No new matter is entered by this amendment. Please refer to the remarks below concerning the 35 USC 102 rejection of claim 24 for further  
15 explanation of the other amendments to claim 24.

**In claim 25, the recitation "the currents of the first and the second transistors are controlled by the difference of the operational voltage and the control voltage; and the currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground" is indefinite.**

20 Applicant has amended claim 25 to change the indefinite limitation "the currents of the first and the second transistors are controlled by the difference of the operational voltage and the control voltage; and the currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground" to the definite  
25 limitation "the currents of the first and the second transistors are controlled by the difference of the operational voltage and the first control voltage; and the currents of the third and the fourth transistors are controlled by the difference of the second control

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voltage and the ground". No new matter is entered by this amendment.

**In claim 37, the recitation "wherein currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground" is indefinite.**

5 Applicant has amended claim 37 to change the indefinite limitation "wherein currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground." to the definite limitation "wherein currents of the third and the fourth transistors are controlled by the difference of a second control voltage of the control voltage and the ground". No new matter is entered by this amendment.

10 Also, applicant has amended claim 36 to change the indefinite limitation "wherein currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground." to the definite limitation "wherein currents of the third and the fourth transistors are controlled by the difference of a second control voltage of the control voltage and the ground". No new matter is entered by this amendment.

15 **In claim 39, "the operational voltage" lacks clear antecedent basis it is not clear if it is the same as the third voltage control signal.**

20 Because the claim 39 is dependent on the claim 38 and the claim 38 includes a first transistor coupled to an operational voltage. Applicant cannot think "the operational voltage" in claim 39 lacks clear antecedent basis.

Applicant points out that the operational voltage and the third control signal can be different or same voltage. For example, the operational voltage can be 3.3 Volt and the third control signal can be 3.2 Volt. In a preferred embodiment of this application, shown as FIG. 5, the operational voltage and the third control signal are the same.

25 **In claim 40, "the ground" lacks clear antecedent basis it is not clear if it is the same as the fourth voltage control signal.**

Because the claim 40 is dependent on the claim 38 and the claim 38 includes a third

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transistor coupled to ground. Applicant cannot think "the ground" in claim 40 lacks clear antecedent basis.

Applicant points out that the ground and the fourth control signal can be different or same voltage. For example, the operational voltage can be 0 Volt and the fourth control  
5 signal can be 0.1 Volt. In a preferred embodiment of this application, shown as FIG. 5, the ground and the fourth control signal are the same.

#### Claims 28 and 38

Applicant has additionally amended claims 28 and 38 to correct the typographical error.  
10 No new matter is entered by this amendment.

#### Claims 24-43 are rejected under 35 USC 102(e) as being anticipated by Dillion (US Patent No. 6,700,403)

Regarding to claim 24, the office action cites Dillion discloses a driving apparatus  
15 and method, in which an output circuit (transistors 71 and 72 in both 65 and 66) to output a differential signal (PAD1, PAD2). Applicant doesn't agree the output circuit (transistors 71 and 72 in both 65 and 66) can output a differential signal. This is because the output circuit (transistors 71 and 72 in both 65 and 66) only can output the **single-ended**  
20 rail-to-rail voltage signal. Therefore, applicant points out that Dillion fails to teach or suggest an output circuit (transistors 71 and 72 in both 65 and 66) can output a differential signal.

Dillion teaches "the **single-ended** rail-to-rail voltage signals of the first and second rail-to-rail drivers 25 and 26 are typically generated ... **In response to first and second data input signals D<sub>1</sub> and D<sub>2</sub>, they would therefore typically generate parallel**  
25 **data signals 45 and 46** at the first and the second output ports 21 and 22" (Col 3 lines 1-7), "the system 60 includes first and second rail-to-rail drivers 65 and 66" (Col 3 lines 25-26), and "the CMOS inverters 65 and 66 provide rail-to-rail output signals at the output ports 21 and 22" (Col 3 lines 43-45).

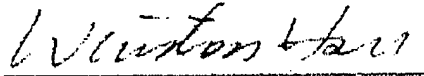
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Applicant points out “ In Dillion’s disclosure, in the rail-to-rail mode, the first rail-to-rail driver 65 generates the single-ended data signal 45 in response to the first data input signal  $D_1$  and the second rail-to-rail driver 66 generates the single-ended data signal 46 in response to the second data input signal  $D_2$ ”. The output circuit (transistors 71 and 5 72 in both 65 and 66) cannot output a differential signal. For example, the single-ended data signal 45 and 46 will be the same if the first and the second data input signals  $D_1$  and  $D_2$  are same data value. Therefore, applicant points out that both the two single-ended data signal 45 and 46 are independent.

Because Dillion teaches the output circuits (transistors 71 and 72 in both 65 and 10 66) only can output **single-ended data signals 45 and 46** and the single-ended signal and the differential signal are completely different. Therefore, applicant asserts that independent claims 24, 32, and 38 should be found allowable with respect to the teachings of Dillion. As claims 25-31, 33-37, and 39-43 are dependent on claims 24, 32, and 38, if independent claims 24, 32, and 38 are found allowable, so too should their 15 dependent claims 25-31, 33-37, and 39-43. Consideration of currently amended claims 24, 32, and 38, and their dependent claims is respectfully requested.

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Sincerely yours,



Date: July 5, 2006

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